

11.5-2
10

11.5-20

STUDENT

FILING COVER

To Bind Completed Matter



Course given by

SUBJECT:

For the
NATIONAL SEPARATE-LEAF NOTEBOOK

Patented by E. W. Hill, July 5, 1898.

$$\begin{array}{r} 18.29 \\ 1182 \\ \hline 20.9 \end{array}$$

Sta 1046 4 Feb 14

3.10 Pm to 4.15 Pm.

Off Trinity Shoal.

S. cloudy rising sea wind

11 1/2 fath = 209m.

blue mud. sample.

0 63.5° 165 -

20 #153 17.35 @ 18

Much dead water hyacinth

net 325
20 min

20 net 0 Scanty diatoms

1/2 m net 20 min 0 Scanty pods & yf.

bottom net 20 min 20-0 ~~Scanty~~ Pteropods
nothing else.

Shrimp trawl 4.53 15 min
nothing! barren bottom
Two

$$\begin{array}{r} 7.3 \\ 9 \\ \hline 82 \end{array}$$

10465 Feb. 15, 17

7.45 AM to AM.

N.W. fresh smooth pty cloudy

Calcasieu bearing NW by W. miles

$4\frac{1}{2}$ fath = 8 meters

mud. bottom.

Surface water muddy.

0 53.5 W S

m. 153

20 net 0 ^{25 min} thick diatoms-

$\frac{1}{2}$ m net 0 Split

~~Shed net~~ ^{newcom. (2nd haul)} 0 good haul of spods

Shrimp trawl $\frac{1}{2}$ hr 27 shrimp

2 nd haul $5\frac{1}{2}$ fath mud,

8.50 AM. Light bearing N

$\frac{1}{2}$ hr. 16 shrimp

TT10756
3 fish

10466 Feb. 15, 17

11.45 Am to 12.15 Pm

S.E. of Sabine Pass

5 fath mud. = 9 m. to 4 fath

Surface 53

W.S.

Shrimp trawl - ^{12.45-}
1/2 hour.

3 shrimp

3 cuttars

2 butterflyfish

1 Hog-choker

a lot of anchovies

1 squid

10,973
914

11,887

10468

Feb. 17, 17

off Galveston Entrance

SSE Fresh. choppy clear.

6.15 Am to Am.

Whistle buoy bearing NNW about 3 miles.

$6\frac{1}{2}$ faths = 39 ft = 11.8 m.

gyms + 5 ^{shells} ~~and~~ bottom. Sample

Shrimp trawl. 6.20 Am.
 $\frac{1}{2}$ hour

Surface temp 53.5

31 large prawn

4 young shrimp

Feb. 26 Th Monday.

Left wharf at Galveston
2 P.M. water green with
little mud between jetties
Surf temp 64 inside

Temp at wharf.

Feb. 17th 52

" 18 52

" 19 56

" 20 55

" 21 56

" 22 56

" 23 60

" 24 61

" 25 64

" 26 64

This is pretty fair record of
lower bay, as tides bring the
water by

10469 3,35- P₁
Sub 20 17,20 P₂
to .. 27

10469 A. Feb. 26th

3.5 P.M. to 9.05 P.M.

4 1/2 to 9 fathoms

Partly cloudy to clear. S.S.E. of ~~light~~ Light
Smooth.

4 1/2 fath depth.
to 6 fath. 4 ft

bottom Hard.
brown mud fine sand

Surface temp. 65.5 Sample

Water green + fairly clear.

Shrimp haul 3.40 P.M. show, 15 ft
40 min to fath. NW 1/2 N.
see over 1

20 net 3.40 P.M.
25 min. fair haul micro.

1/2 net. 3.40 P.M.

many clupeids, smother, much
else.

60 med. to large shrimp
5 small,

134 small Stellerfish

2 bag chokers

4 tongue & fish

4 cutlass

2 large & 2 small Murtinichia

47 small hant,

4 butterfish

1 small trophycis

1 small squid.

B. 4.30 P.M. 6 1/2 fath mud

Shrimp haul 15 ft.

1 haul, to fath NW 1/4 N. 3th 8 fath.

8 fath = 14 1/2 m. end. of B.

Surface, 65.5

14 m. # 153 15.82 @ 17 WS
= 60:55

1/2 bucket fine large shrimp

1 bucket fish - see over,

Stillife 219
 Monticulus 12
 Baridilla 1
 Inat 189
 Crook 13
 Batfish 1
 Hoq-choker 1
 Butterfish 2

Tongue fish 2
 Ectopus 4
 Diphtheria 6
 Robin 1
 Catfish 1
 Cutters 4

C. 5:50 Pm. E fish all
 getting heavy NW 1/2 W. 1 hour
 42 very large, 4 small short
 1 black drum, 6 1/2 Kg. 77 crs.
 1/3 bush. fish as follows. ~~from 2~~

~~Merbader 34 (left)~~
~~Front 188~~
~~Whites 15~~
~~Spot 3 large~~
~~Croaker 47~~
~~Cats 4~~
~~Sardines 2~~
~~Skullfish 40~~

Sting ray 1
 Sigan 1
 Diphtheria 8
 Purple 1
 Spade 1
 Robin 3
 Amphipods 5 to 10
 Batfish 1
 Tongue 1

D. 7. P.M. 1 hour to 9. fath.
Bolivar St WNW: in 9 fath, stand
hard mud bottom,

2 large & many small shrimp

5 trout

1 ~~gulfstream~~

4 cats

5 ~~croakers~~ (left)

9 white

8 small flounder (left)

4 croakers

1 small stingray

1 Batfish

1 eel,

4 Spade-fish

2 large Spot

1 ~~gulfstream~~

1 pinfish

E. 8.05 P.M. 9 fath. hard mud.

1 hour
to Bolivar St. WNW $\frac{1}{4}$ W

2 large & many small shrimp

7 good sized white

1 robin

33 small
flounders

2 trout

5 bats

2 large spot

5 ~~croakers~~

(8 tongue)

2 croakers

1 Protuber?

1 ~~gulfstream~~

3 spade

1 Spade (left)

2 lizard

1 Sting ray

few small crabs etc.

10469

F.

Feb. 27th 1917

7 fath. dred. clear S. bottom
sand bottom

12:45 AM.

Shrimp trawl, 15 ft 1 hour.

5 large shrimp small shrimp

110 Trout 8 small flounders

5 croakers 6 tongue fish

3 spot 3 catfish

59 sticklebacks 5 menhaden

12 good whiting 1 Sting ray

1 Scrimus 1 Butterfly ray (14 ft)

4 Spades

1 Orthopristis

1 Robin

1 Diptera

2 Urophycis

Feb. 27th 6 Am. S.

Calm, clear, choppy

Surface temp 64°

10 fath, mud, towing N, Bolivar
light bearing N by W. at start.

Shrimp trawl, 15 ft wide,
50 minutes,

8 small shrimp

1 shark, 63 in, ^{Scorpaenidae} ♂

(saved)

20 trout (not in)

2 whitefish

4 catfish

3 lizard

1 Daphnia

2 Spades

1 Perch

2 small flounder,

a few squid,

Length & wt. trout (nothus)

18	cm.	113	gr.
19	"	55	
19	"	58	
19	"	68	
19	"	68	
20	"	75	
22		100	
23		103	
24		154	
25		144	
25		150	
27		212	

Whiting

23	—	135	gr.
24		170	"

Feb. 27 H,

6 fath. stickup

clear. calm, light chop.

8.20 Am. 9.20 Am. ^{Surface} 64°

Galvez Hotel bearing N. lowing NE

to 4 fath. " " NW $\frac{1}{2}$ N.

Shrimp net 15 ft 1 hour.

to 4 $\frac{1}{2}$ fath. Hotel W by N.

Many large jellyfish on surface. Water clear green.

31 large shrimp, no small ones

7 white,

3 menhaden

1 Orthopristis

11 cutlass

6 trout

14 butterfly

1 small flounder.

2 Sticklefish

1 Robin

1 pipe fish

Many large
jellyfish

I Hotel W. 4 1/2 fath.

9.55 Am. Towing E

1 hour. to fetch NW Hotel W
had 4 aft sound.

54 medium to large shrimp 1

1 string ang.

1 cheilomycterus

170 small stellifer

65 trout

1 menhaden

1 Orthopristis

2 Cutlass

1 Butter fish

2 Pipe fish (harp)

4 Whiting

3 Robins

1 very small Ancylopusella

4 squid

many large pellics

J

10.40 AM

from NW by N Hotel W
to ~~from NW by N~~ 1 hour

399 shrimp, 2 buckets, wt 12.25 Kg.

a few small fish, practically
the same as Haul I.

K. continued from J

11.45 AM.

12.45 P.M. 7½ fath

1⅓ bushels fine large shrimp
about 1 bucket of fish, mostly
trout + whiting. same as before

Note Bene, Sta 10469

Tin tag 10757, 12 Menhaden
10758 1 Skate
57 1 Ray.

60-61 + 62 Cynoscion nebulosus

63 + 64 24 Menhaden

65 Cynoscion nebulosus

66 2 Menidia menidia

67 10 miscellaneous

68 4 Clupea

69 12 Menhaden

70 9 Cynoscion nebulosus

71 6. Menidia

L. continuous with R.

12.50 PM to 1.20 PM

7 1/2 fath

7 1/2 fath.

1/2 hour.

31 large shrimp
a few small

3 White,

46 trout

5 Mophris

1 Diplectron

13 Croakers

18 Sticklefish

1 Laimus kept.

2 Spade

1 Small flounder

1 lizard

a few squid

M. Most of felling

4 1/2 fells sticky

U. fatty beams, S.E.

3.10 PM, 45 minutes,

Cool-end came loose
while landing, all lost but 2
large black drum.

Quite a number of shrimp in
bag, also 2 more drum & some
large felling. (Prob. 1 bucket shrimp).

Black drum, ^{Hard ♀} 82 cm. 7 3/4 Kilo

Ripe ♂ 88 cm. 9 1/4 Kilo

flesh full of large worms.

11/11/11

U. Feb. 27 4.25 pm.

3 1/2 fath. Surface Temp 65°
fath. South. Light SW by W.
4.25 pm. ENE (about).
1 hour to 10 SW by S. 5 fath.
and more.

89 medium to large shrimp
the largest 20 to 21 cm.
1/2 bucket small fish as follows

Trawl	193	Catfish	2
Slitfin	20	Robin	1
Croaker	1	Mudpuppy	1
Whiting	4	(Bonnet head 1)	
Spade	1	Small	
Harvest	3		
Tongue	2		
Choker	1		
Am. Flounder	3		



O. Feb. 27.

6.20 Pm.

fath. 14 SW B. by S. by W.
6 fath. mud. 1 hour.

234 large to medium shrimp
filled 1 bucket, weighed to 1 lb.

1/2 bucket of fish, as follows

Butter fish	17	Rain	1
Butter fish	1	Chicken	3
Small plaunders	9	Wofley's	2
Whiting	14	Deflection	2
Sticklefish	23		
Trachery	9		
Menchaden	12		
Croaker	5		
Trout	70		
Lizard	1		
Catfish	3		
Tongue	14		

Several large
jellies

$$\begin{array}{r} 14.6 \\ 9 \\ \hline 13.5 \end{array}$$

Sta 10470 Feb. 28

9.30 AM to AM
Point Lat 29°03' Long. 94°26'
~~Point not well defined~~
~~Point not well defined~~

8 1/2 fath. = 15.5 water ^{Sand} shells. Bottom
S. choppy light clear. W.S.

62.5 ✓

15 m. #153. 16.66 @ 20 ✓

Water clear, greenish blue

20 net 0 7.45 ^{1/2 hr} = Scanty ^{pink} shells

1/2 m net 0 9.15 " Very scanty

2nd " bottom 100 ^{9.45} " Very scanty

Other trawl. 10.30 AM 1/2 hr

Many small cutlass fishes

16 small ¹ *Trigloporus capricornis*

TT 10772 + 10773

Ran 5 miles N. to 9. fath

Sand - see cov

Haul B. ^{1/2 hr.} 9 fath yellow sand.
noon. to 12.30, 9 fath blue mud sand
2 bat-fish
2 small trout
2 stillife

Lat $29^{\circ}10'$ Long. $94^{\circ}24'$

Haul C. Mch. 1st 5.50 Am.

Heald bank lightship SE $\frac{1}{2}$ mile

Clear, smooth light S.

7 fath. Sand & shells, 45 min.

going NE to 7 fath. by same
lightship SW 2 miles.

1 small orthopristis

Hand D. March 1

8:00 - 9 sand - 499 marks

1/2 hr. ENE.

1 large squid (drift) } ^{TT} 10775

2 fine small cuttlefish
shells

Hand E

Sun May 85

7:30 AM. 10 fish Hand.

1/2 hr. SW. fog. rain. 9:30.

49 sand.
shells

2 cuttlefish

F

10:40 AM

10 fish Hand. 2 sand.
shells

fog &
rain.

1 red fish

1 crab

10 sand f.
big nauplius

G. 2.25 Pm. Thick
fog. 14 fath mud + sand. $\frac{1}{2}$ hr.
Blue water surface 66" WS.

20 Otrynter nothing else
TT 10776
Color when alone TT 10777

Silvery with bronze + purple
reflections. Largest ones with traces
of 3 dusky vertical bars, 1st from
1st Dorsal ^{spin} to base pectoral, 2nd from
6th dorsal spine, 3rd very faint, from
10th dorsal spine.

Top of snout purplish

Interorbital region + nape olive

Spinous Dorsal ^{edged}
~~Dorsal~~ with yellow membranes

Soft dorsal yellow at margin, 3 longitudinal
rows yellow spots, light blue spots between

Distal edge caudal maroon, ~~with~~

edging salmon at tips of lobes

Anal with faint yellow band

Scales of back browned at edges, giving
the effect of stripes. Iris olive brown

$$\begin{array}{r}
 18.29 \\
 16.45 \\
 \hline
 54.74
 \end{array}$$

96
 

Sta 10471 Mch 1st

9.45 PM. to 10.40 PM.

W. ~~Sight~~. Cloudy choppy sea.

Squally, showery.

28° 30' 41' 29"

19 fath - 34 meters.

Bottom soft muds

W-S.

0 68.5

✓

30 #153. 18.30 @ 19

✓

20 Lit 10.05 PM
0 1/2 hr Scanty mino
fods, sag. & 4 f.

1/2 m net 10 1/2 hr Rich fods, sag. & 4 f.

Bottom net 30-0
35 min

Rich haul 4 f.

Other haul Non squally.

$$\begin{array}{r} 54.8 \\ 9.1 \\ \hline 63.9 \end{array}$$

Sta 10472. Mch, 2, 17

7.30 AM to 9 AM.

N. light cor. sec. shown:

28° 02'. 94° 40'

35 fath. - 64. meter - ^{no} sample.
water very blue

0 69.5 ✓

20 #148 20.42 @ 20 ✓

40 #151 19.40 @ 20 ✓

60 #153 18.18 @ 20 ✓

many Physalia, very large.

Nets 7.50 AM

20 net 0 Rich. species - general.

1/2 net 0 Rich. band, pods - same
young fish

meter net 55.0 Rich. band of pods, 9/10 spec.

Other trawl 8.30 AM. 1/2 hr

4 Ostracods 2 other fish } all kept.
3 sponges 2 squid }
1 Gorgonian sea urchins }
several belemnites, etc. }
10774

$$\begin{array}{r}
 12\cancel{8} \\
 \underline{12\cancel{8}} \\
 140.8
 \end{array}$$

Sta 10473 Tuck 2, 17

11.15 Am. 1.15 Pm

fine shelly soft shelly

77 fath = 140 meters.

Sept 99 mud, ~~no~~ sample.

0 71° WS.

50 149. 20.15 @ 19.

75 148. 18.80 @ 19

100 151. 17.85 @ 19

135 153. 15.33 @ 19

Under net 11.00 11.00 min Rich mud
125-0 4 ft 0 in

20 net 0 11.00 1/2 hr

100 net 0 12.15 Pm,
fair haul for the

Other haul 1/2 hr,

Grand failed - nothing, but

thing.

10474 Meli 2, 1917

4.35 P.M. to P.M.

SWN. chaff, fresh slawdy,
onboard.

70 1/2°

WS.

50	145 148	20.40	P	20	✓
100	153	17.32	Q	20	✓
200	149	12.70	S	18	✓
300	148	10.00	S	20	✓
400	151	8.62	Q	20	✓
500	153	7.48	Q	20	✓

enter net 5.40 P.M. 40-man

Engine stopped, fuel & tar

1/2 in net 0 6.10 P.M. 40-man.
Rich pods

Bottom net 7.15 P.M.

1 larger, 5 smaller

3 dry at the 5

2 left at the 5

good luck here

$$\begin{array}{r} 12.8 \\ 1 \\ \hline 13.7 \end{array}$$

12.8

$$\begin{array}{r} 146 \\ 9 \\ \hline 155 \end{array}$$

0	0
20	5.2
60	11
90	10.0
120	12.5
150	13.2
180	14.5

h

10475 Mch 3, 17

8.15 AM to 9.40 AM

Cloudy, ^{Stiff} N, ^{high} NE, choppy sea.

85 fath = 155 mi.

0 69 10-5 ✓

50 148 20.37 @ 19.

75 133 19.84 @ 20

100 149 15.90 @ 19
16.95 @ 20 ✓

125 148 16.90 @ 20 ○

150 153 16.90 @ -20 ✓

Sled net 150-0 ^{9 AM} 1/2 hr, good haul
general, beds & 4 ft, (some a filled)

1/2 hr net 9 AM 0 1/2 hr. good haul gen
beds & 4 ft

20 net 9^{0.5} AM. an old patched
net, low, & shabby

Brought up at close of the
station. Reefed mainsail

10 AM. 12.30 PM. wind increasing
to 9 mph storm sail.

USE THIS IN THE BOOK

AS AN

INDEX SHEET

To divide off the work
in different studies

— OR —

FIG. 11

FILING COVER

To bind, with the fasteners,
all work worth keeping for review.

For use in the

National Notebook

Patented by E. W. Hill, July 5, 1898.

SUBJECT OF STUDY:

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To index the book, write below on the margin, the name of the study.



0476 March 5th

9.30 AM to 10.30 AM

Off Orange Reef. 5.75 E. Light

766 fath - meters.

Haul. A. from outer buoy N 9.30 AM
dir. 45° 765 S fath.

Surface Temp. 58

1/2 hr net - 9.30 AM, 1/2 hr.
Scanty small fish + Stimpson
+ fish eggs.

Shrimp haul, 2.30. 45 min.

1/3 Bush med. to large shrimp

1/3 " fish.

Haul B. 11. AM. 7 fath to 7 1/2
from buoy. ENE 40 min

TT for entire station

10778 - 10789

Station of S. buoy bearing WSW

7 1/2 fath = 13.5 m. Light " W by N

0 58 W. 2.

13 m, #153 15.25 @ 15 W. 2.

Haul C. (continuing B.)

11:55 AM. 35 min to 9 fath.

Slight W by N.

~~Shrimp~~

6 shrimp

1 *Alpheidae*

1 *Callinectes*

1 large, sev. small squid

much wood on bottom

Red net 9 fath. 12:35 PM.

1/2 hr. to 10 fath.

fair haul for 1/2 hr.

Color of *Portunus* in haul B

Ground pale, flesh color.

4 rows markings of rich bronze

Haul D. 11:55 PM.

Towing E.

Ground blue shells. 1 hour.

1 large & 21 medium shrimp.

Some of shell kept

a few fish & squid all kept

E. 7.10 Pm.

Cavallos St NNE 5 fath. ^{to 8 1/2 fath.}
Wind SE by S. freshening
smooth sea
towing E good sound. bottom,
1 hour

1 basket fine large shrimp.

1 " Steller

1 basket other fish, many left.

1 Astroscepus

3 small hermit heads

Several good whiting.

But very few young food fish
in this haul.

beam

NNW 5 fath to 7 1/4

F 8.40 Pm.

50 min.

got too rough to fish

smooth

Nearly a bushel large shrimp

$\frac{1}{2}$ bushel still life.

A few good fish, mostly whiting

A variety of stuff kept.

March 8th 1917

Left Galveston 2.30 Pm.

Sta 10477. 6 1/2 miles SSE from
south jetty. Towing NE ^{2 1/2 ad vessel}
5.20 Pm. Surface 59.5°

Partly cloudy, ESE. smooth light.

Water about WNW

1 hour

1/2 bushel large shrimp	5 spades
1/2 bushel stellifer	2 bats
	1 Harvest

A few small trout	3 Urophycis
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1 Menhaden

2 Lizard

1 Brocton

3 Tongue

2 Spot

2 Catfish

15 flatfish

a few small
squid

8 Whiting

3 croakers

4 string rays

1 Skate

B. 345 - Sun
Run, NW by N $\frac{1}{2}$ W 2 $\frac{1}{2}$ fath.
towing N to light NW by
6 $\frac{1}{2}$ fath 1 hour (each)

Soft mud.

1 Bucket large shrimp =
185 large shrimp ^{character}
1 $\frac{1}{2}$ Buckets fish, same as haul A.
with the addition of a few
murelodon.

light NW by N, 6 fath.

54m, towing S.W

10 5 fath. 1 line,

2 bushes large feller,

49 med. to large shrimp

1/2 bucket fish, same character
as haul A, + a Bairdella.

D. 6.15 Am. from C.
S by W to 70 fath and
on S.S.W. 1 hour

1 bucket and to big ones
200 (bucket not quite full.
 $\frac{1}{4}$ bucket fish, same as A,
but no flatfish, and
18 menhaden

E 8.41 AM.

Starting from buoy, Town
N.W.E. to 5 fath. 4th min.

Light W. by S.

Very soft red sand.

6 medium shrimp

A few small white, + trout

A few Stickle.

2 burshes large yellow.

F 11.05-AM.

2 feet Towing NE

Blue mud & fine sand
40 min to $7\frac{1}{4}$ fath.

~~fine shrimp 1 1/2 buckets~~

$1\frac{1}{2}$ buckets fine large shrimp.

1 bucket Sticklefish

Very few other fish, inc a few
menhaden.

fresh E Breeze, Cloudy.

G. 12 m. (continues with F)

1 hour to $6\frac{3}{4}$ fath.

44 medium shrimp

1 bucket Sticklefish

1 bucket big fillets

Practically no other fish.

35 miles

7.30 to noon

4. $\frac{1}{2}$
4. $\frac{1}{4}$
<hr/>
8

$$\begin{array}{r} 2.75 \overline{) 35.00} 4. \\ \underline{35.00} \end{array}$$

March 16th Left Galveston

7.30 AM. Light SE air and a little fog that cut down the vessels speed under power very considerably. 4.15 P.M. Arrived at Heald Lightship and delivered 400 lbs salt, + 2 barrels.

Speed of vessel exactly 4 miles an hour for the 35 miles, and that going with engine full speed (+ some help of tide, as log) (registered 2 miles short).

Sta 10479 next

tin tags = 10478

10790, ~~Skate~~

91, 12 menhaden

92, 12 "

93, 12, miscell

94, 3 bristulids

95, 9 menhaden

96 1 squid

97, 85 small flounders

98 mixed small

stuff



Sta 10419. Tuck 16th

6:55 Pm.

9 fath sand, gravel & mud

11 miles SSW from Heald Lightship

SE light, cloudy high swell,

Surface temp 66.

Towing ENE Shrimp trawl

1 hour to 10 1/2 fath

3 buckets full of all

Orthopristes (spawning) 108

Traut, Nothos, 3 ripe ♂, 1 ripe ♀ 2 sm all

Spot, large 13. Anchovy 25

Creakers 1 Small flatfish 39

Otrynter 3 Brotulids 3

Pinfish 7 Lingards (2 sp) 3

Whiting 4 Sea cats 2

Diflection 11 Urophycus 3

Robins (2 sp) 9 Many small shrimps

Gurnards " 11 crabs & shells.

Puffers 2

Haul B, continuous
with A.
8:25 P.M.

After 10 minutes a weather
started in & stopped work for
the night.

Very little in this haul, added
to A.

TT (10479)

10799

to 10800 - ~~one~~

Sta 10480

TT 10806

10807

10480 March 20, 12.35 P.M.

SE stiff choppy pty cloudy.

Galveston sea buoy bearing
W $1\frac{1}{2}$ miles.

lame ESE.

Surface temp.

Too rough for birds.
Shrimp trawl 15 ft.

0.15 min.

Shrimp

$\frac{146}{80}$

Sticklefish

$\frac{25}{94}$

Trout

32

Crawfish
11

Whiting
11

hake

2

80 large shrimp.

94 Sticklefish

32 trout

7 Crawfish

1 Whiting

2 hake

2 cats

1 bass

1 flatfish

2 whiting

1 mackerel

3 squid

Feb. 20.

Left Vancouver 11 Am

12.35 Pm Made St. 10480.

Stiff SE breeze & rough choppy

sea. cloudy, clearing later.

Set course for SW Pass.

Feb 21st light SE breeze & smooth.

sea, engine running all day. In Pm

found torpid boat beyond West

Blue water all day. Much weed.

Feb 22. Light SSE breeze, smooth

sea, clear. School of porpoises at

noon. 3 Pm. many pelicans,

no sign of fish - trolling line over

containing ~~nothing~~

3 Pm Surface 70°

4 Pm 63°

5 Pm 55° off W. Pass.

6 Pm 55°

1000 fms. surface 63°

Sta 10481 March 22

9.45 PM to 11 PM,

17 miles E from SW Pass Lightship.

Smooth light clear SE

80 fath = 146 meters.

		63		WS.
30	149	21.75	@	20
60	148	20.09	@	20
90	151	18.79	@	20
120	153	18.79	@	40

(10)

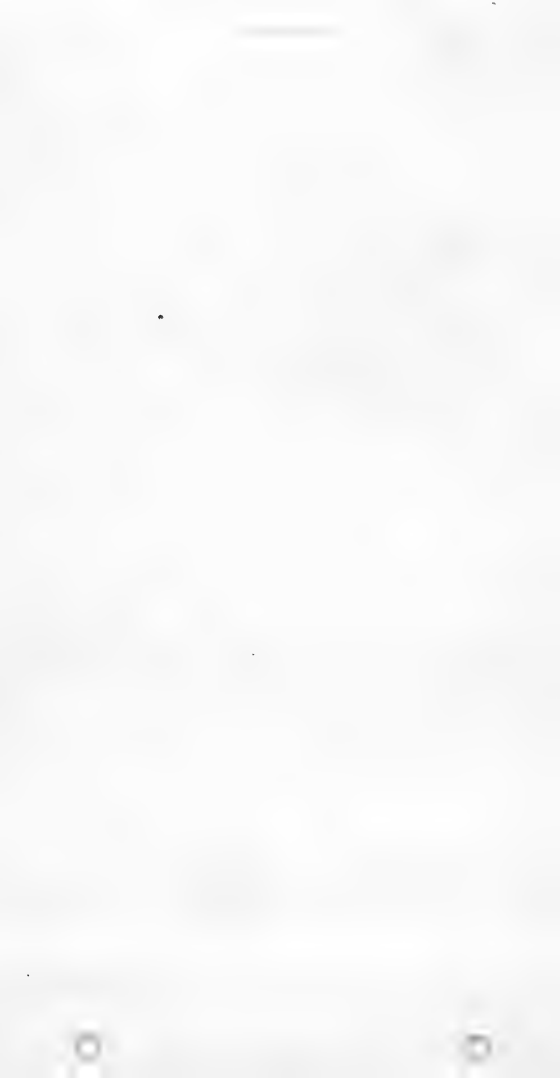
Nets 10:20 PM

18 net 0 1/2 hr. Rich mud + micro

1/2 hr net 0 1/2 hr. Rich yf + gen.

Net net 40 min. S. sandy fords
yf + gen

over



10462- Mch 23

4.30 AM. 27 miles E of St.
Jude. ^{light} trawl with 600
meters wire. Trawl net on
the end.

5.40 AM sent down
net with a messenger.
6.45 hauled both.
SE clear light, calm.
(over about 500 fath.)

Shrimp trawl 2 1/2 hrs. 500-0 m.
Large Stomatopoda. Thysanophora
Stomatopoda Pyrosoma
+ 3 sp. red shrimp.

Water net 1 hr. 500-0 m.
Coarse general haul.

Set course for Pinnacles
for night & daylight
fishing out.

2000

Feb 27. Fine day.
Traveled all day to without
result. Reached Pecos at
about 11:30 P.M. and
came to an anchor.

Feb. 28.
Left Pecos at 1:30 P.M.

To 10475 Feb 25th

Pm. to Pm.

SSE light clear smooth.
after 2 days weather.

From Pensacola out. buoy
haul A. from water buoy Fly S.
4⁰⁰ Pm. Light Sand.

Surface temp. 65.5. WS.
water full of ctenophores.

Hauled 1/4 hour very slow
shrimps taken - 1 shrimp net.
no wind.

- 3 robins
- 2 lizards
- 1 Skate

A few squid
2 large small squid eggs
a few small shrimp & star.

T.T. 10808 - 10810

54
 12
 55

March 29th clear light E.E.
 to 7:00 all day. Under power
 all day. Many porpoises and
 considerable wind. Took several
 species of fish from the bottom.

Sta 104000 - March 5/77

Light W. 2000 ft

530 PM to 730 PM

3' fall in 55 meters. hard
no sample.

Surface. 70° 145.

25 151 21.40 @ 17

50 153 20.21 @ 17

$29^{\circ} 00'$ $85^{\circ} 21'$

Shaffer Area - no 1/2 hr

Shrimp Trawl. @ P.M., 1/2 hr. slow.
1 flower. 1 star.

Water net 50-0 6.40 PM 1/2 hr

Scanty 4/4 gen.

1/2 hr net 0 6.40 PM 1/2 hr

Plk small pods + 1/2 hr

18 net 0 6.40 PM 1/2 hr.

Scanty water

TT 10811

Sta 10485 Mich. 30, 17

8 PM to 9.15 PM.

Clear, smooth Light E. 28° 05'

20 fath. - 36 meters

83° 55'

Sand bottom no sample

0 106.5 108.

17 151 19.37 @ 19 ✓

34. 153 18.55 @ 19 ✓

Shrimp trawl. no catch

Net net ^{2.5 ft} _{20 ft} Swarms @ 2 1/2 ft

fishes picked out - 1/3 residue kept.

1/2 m net 0 5 ft. general
(reduced to 4 ft) & all kept.

18 net 0 Scanty.

March 31st 9 Am.

Brought today 1 *Synsarcus*
albidus TT 10812

♂, testes undeveloped.

77 cm. wt = 130 grams (tag)

Stomach, a few small fish.

(kept.)

Am. saw school of large
flying fish.

2:30 P.M. off Lyman Key
about 10 miles.

4 P.M. Spanish Water

71 cm. ♂

Stomach undeveloped

Stomach empty

April 1st Sunday, anchored at
Boca Grande 6.30 A.M.

Went up to town & saw about
Shrimp etc. Dr. Atwood,

Fished for Turtles in P.M.

S. Bay, caught yesterday in
flats.

Apr. 2nd. Shrimp trials &
seining in S. Bay. Lab. in P.M.

Apr. 3rd. Left Boca Grande
6 A.M. 14 boats fishing in
pass.

Sta 10486. Apr. 3rd.

Boca Grande water buoy.

7 Am to Am
fath = miles

Surface 74.5 W.S.

Shrimp trawl 45 min.
Hatched fish - see below.

1/2 m net 1/2 hr.
Scanty, mostly minute
fods.

18 net. 1/2 hr.

Rich, minute fods.

188 small red-mouthed grunts

191 red snapper

TT 10813-10815

1820

Apr. 3 6 P.M. Yellow
caught 1 Passage pigeon
73

STc 10487

Apr. 4. 4 Am to

20 miles N from Bay St. Louis.
Passage.

11 fath - 20 miles

Singapore 74

20 mi # 151 23.50 @ 23

18 net 4.35 Am 1/2 hr

Pick Micro.

1/2 hr. net 4.35 Am 1/2 hr.

Asian general land

Shrimp trawl, 4:30 Am 40 min.

net torn. 3 small flatfish

+ 1 tongue fork TT. 10816

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Port. (young) ♀

Total 146 cm.

Breadth of tail 34

Snout to D 67

" P 39

Height D 24

Base " 23

Length P 23

Base P. 9.

Beak to groove 9.5

" " gape 21

" " blow-hole 26

" " eye 25

Eye 2.5

Lower jaw to gape 21

Beak to vent 28.5

Length of vent 8

Depth at D 27

grey above, ~~light~~ below, lighter below,
pectorals dark.

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